

Lot 11—Field 1

FIELD WORKSHEET #1 GENERAL FORESTRY INFORMATION

Lot # 11 Total Acres: 94 Field Number(s): 1 Acres: 59 Date: 8/20/03

Reported By: Earth Spirit Educational Services, Inc.

Principal Species	DBH* (inches)	Density (Heavy, Medium, Light)	Growth Rate**	Age Class (Even/Mult.)	Age	Heights (feet) Crown/Usable		Condition (Good, Fair, Poor)
Sugar Maple	P-32	Heavy	24	Multiple		85	45	Good
American Beech	P-22	Medium	10	Multiple		76	30	Fair
Eastern Hemlock	P-29	Medium	38	Multiple		82		Good
Black Cherry	15-22	Medium	16	Multiple		70	36	Good
Yellow Birch	P-17	Light - Medium	18	Multiple		70	30	Fair

* “S” refers to saplings, “P” refers to pole size dimensions, “SL” refers to saw log dimensions

** Represents the most recent growth rings per inch from a core sample

Comments

This field represents a mature, mixed Hardwood Forest that includes and borders upon an extensive Marsh/Wet Meadow Community.

Aquatic Systems – includes both lentic (standing water) and lotic (flowing water) systems

This field contains an intermittent stream that drains northward from the Marsh/Wet Meadow Community. This extensive wetland community parallels the southern boundary of this field.

Fire Lane Status

The Fire Break in this field is approximately 6-8 feet wide and transverses some steep and wet areas adjacent to the wetland community. This Fire Break is in need of significant widening, clearing and pruning.

Lot 11—Field 1

FIELD WORKSHEET #2 ECOLOGICAL ANALYSIS

Ecological Overview

Forest Physiognomy (outer appearance)

Canopy

The canopy is of medium - heavy density and is characterized by Sugar Maple (*Acer saccharum*), American Beech (*Fagus grandifolia*), Black Cherry (*Prunus serotina*), Eastern Hemlock (*Tsuga canadensis*) and Yellow Birch (*Betula lutea*).

Subcanopy

The subcanopy is of medium - heavy density and is represented by a variety of hardwood species.

Shrub Layer

The shrub layer is of light density and includes Brambles (*Rubus* spp.).

Herbaceous Layer

The herbaceous layer is of medium density and is dominated by a variety of ferns such as Hayscented fern (*Dennstaedtia punctilobula*), Interrupted fern (*Osmunda claytoniana*), New York fern (*Thelypteris noveboracensis*), Evergreen Woodfern (*Dryopteris intermedia*), Cinnamon fern (*Osmunda cinnamomea*), Lady fern (*Athyrium filix-femina*) and Sensitive fern (*Onoclea sensibilis*). This field also contains Tree Clubmoss (*Lycopodium obscurum*) and scattered herbs.

Successional Status

This field represents a mature, mixed Hardwood Forest that continues to evolve into a Maple/Beech/Birch Climax Forest.

Botanical Concerns - includes both invasive and protected species

Invasive: None

Protected: All ferns and clubmosses listed under “Herbaceous Layer” except Hayscented fern (*Dennstaedtia punctilobula*) and Sensitive fern (*Onoclea sensibilis*).

Lot 11—Fields 2, 3 and 5

FIELD WORKSHEET #1 GENERAL FORESTRY INFORMATION

Lot # 11 Total Acres: 94 Field Number(s): 2, 3 & 5 Acres: 28 Date: 8/22/03

Reported By: Earth Spirit Educational Services, Inc.

Principal Species	DBH* (inches)	Density (Heavy, Medium, Light)	Growth Rate**	Age Class (Even/Mult.)	Age	Heights (feet) Crown/Usable	Condition (Good, Fair, Poor)
Red Pine	10-20	Heavy	20	Even	61	76	Good
Scotch Pine	10-18	Medium	18	Even	61	74	Good
Black Cherry	S/P/SL	Medium		Multiple			
Sugar Maple	S/P	Medium		Multiple			
Red Maple	S/P/SL	Medium		Multiple			
American Beech	S/P	Light		Multiple			

* “S” refers to saplings, “P” refers to pole size dimensions, “SL” refers to saw log dimensions

** Represents the most recent growth rings per inch from a core sample

Comments

These fields represent mature Conifer Plantations in the mid - late stages of hardwood succession. These fields also contain significant numbers of mature hardwoods characterized by Black Cherry (*Prunus serotina*) and Red Maple (*Acer rubrum*). Note: The mature Black Cherry (*Prunus serotina*) are generally multi-trunked.

Aquatic Systems – includes both lentic (standing water) and lotic (flowing water) systems
None

Fire Lane Status

The east-west Fire Break in these fields is approximately 12 feet wide, generally in good condition and is in need of marginal widening, clearing and pruning.

Lot 11—Fields 2, 3 and 5

FIELD WORKSHEET #2 ECOLOGICAL ANALYSIS

Ecological Overview

Forest Physiognomy (outer appearance)

Canopy

The canopy is of medium density and is characterized by Red Pine (*Pinus resinosa*) and Scotch Pine (*Pinus sylvestris*) along with intrusions of mixed hardwoods, especially Black Cherry (*Prunus serotina*) and Red Maple (*Acer rubrum*).

Subcanopy

The subcanopy is of heavy density and is represented by a variety of hardwood species such as Sugar Maple (*Acer saccharum*) and American Beech (*Fagus grandifolia*).

Shrub Layer

The shrub layer is of light - medium density and includes Brambles (*Rubus* spp.), Tartarian Honeysuckle (*Lonicera tartarica*) and Poison Ivy (*Rhus radicans*).

Herbaceous Layer

The herbaceous layer is of medium density and is dominated by a variety of ferns and clubmosses such as Evergreen Woodfern (*Dryopteris intermedia*), Crested fern (*Dryopteris cristata*), Hayscented fern (*Dennstaedtia punctilobula*), Cinnamon fern (*Osmunda cinnamomea*), Sensitive fern (*Onoclea sensibilis*), Tree Clubmoss (*Lycopodium obscurum*) and Running Pine (*Lycopodium complanatum*) along with scattered herbs.

Successional Status

These fields represent mature Conifer plantations in the mid - late stages of hardwood succession. At present, hardwoods exist in all forest levels and will continue to gradually out compete the conifers as the system evolves into a Hardwood Forest.

Botanical Concerns - includes both invasive and protected species

Invasive: Tartarian Honeysuckle (*Lonicera tartarica*)

Protected: All ferns and clubmosses listed under “Herbaceous Layer” except Hayscented fern (*Dennstaedtia punctilobula*) and Sensitive fern (*Onoclea sensibilis*).

Lot 11—Field 4

FIELD WORKSHEET #1 GENERAL FORESTRY INFORMATION

Lot # 11 Total Acres: 94 Field Number(s): 4 Acres: 7 Date: 8/20/03

Reported By: Earth Spirit Educational Services, Inc.

Principal Species	DBH* (inches)	Density (Heavy, Medium, Light)	Growth Rate**	Age Class (Even/Mult.)	Age	Heights (feet) Crown/Usable	Condition (Good, Fair, Poor)
See Worksheet #2							

* “S” refers to saplings, “P” refers to pole size dimensions, “SL” refers to saw log dimensions

** Represents the most recent growth rings per inch from a core sample

Comments

This field represents a significant Wetland Community characterized by both open water and dense shrub thickets of Chokeberry (*Pyrus* spp.), Honeysuckle (*Lonicera* spp.), Dogwood (*Cornus* spp.) and Nannyberry (*Viburnum lentago*).

Aquatic Systems – includes both lentic (standing water) and lotic (flowing water) systems (see above)

Fire Lane Status

The Fire Break in this field involves a section of the same Fire Break described in Field Numbers 2, 3 and 5.

Lot 11—Field 4

FIELD WORKSHEET #2 ECOLOGICAL ANALYSIS

Ecological Overview

Forest Physiognomy (outer appearance)

Canopy

The canopy is not present.

Subcanopy

The subcanopy is not present.

Shrub Layer

The shrub layer is of heavy density and includes Chokeberry (*Pyrus* spp.), Alternate-leaf Dogwood (*Cornus alternifolia*), Tartarian Honeysuckle (*Lonicera tartarica*) and Nannyberry (*Viburnum lentago*).

Herbaceous Layer

The herbaceous layer is of heavy density and is dominated by a variety of ferns such as Marsh fern (*Thelypteris palustris*), Royal fern (*Osmunda regalis*), Cinnamon fern (*Osmunda cinnamomea*) and Sensitive fern (*Onoclea sensibilis*) along with Bur-reeds (*Sparganium* spp.) and diverse herbs.

Successional Status

This field represents a Wetland Community possessing both open water and significant wet thicket environments. Hardwoods along the edge of the wetlands, especially Red Maple (*Acer rubrum*) and White Ash (*Fraxinus americana*) are presently existing throughout the wet thicket along with the dominant shrubs. This community is in the mid stages of succession as it evolves from an open water pond to a young mesic forest environment.

Botanical Concerns - includes both invasive and protected species

Invasive: Tartarian Honeysuckle (*Lonicera tartarica*)

Protected: All species of ferns listed under “Herbaceous Layer” except Sensitive fern (*Onoclea sensibilis*).

Lot 11 Summary and Recommendations

FIELD WORKSHEET #3 WILDLIFE SUMMARY

Lot #11 offers an excellent variety of habitats for diverse populations of wildlife species. Field Number 1 represents an extensive mature, mixed Hardwood Forest. Field Numbers 2, 3 and 5 represent mature Conifer Plantations with significant intrusions of hardwoods and Field Number 4 includes a diverse Wetland Community that possesses both open water and dense shrub thickets. In addition to these environments, Lot #11 also contains an intermittent stream and is bordered along its southern boundary by an extensive Marsh environment.

During a period of one and one-half days, staff ecologists recorded a variety of wildlife observations focused upon actual sightings and other wildlife “signs”. The following list represents a brief overview of those encounters focused upon Mammals, Birds and Reptiles/Amphibians.

Mammals

Whitetail Deer (<i>Odocoileus virginianus</i>)	Red Fox (<i>Vulpes fulva</i>)
Gray Squirrel (<i>Sciurus carolinensis</i>)	Raccoon (<i>Procyon lotor</i>)
Red Squirrel (<i>Tamiasciurus hudsonicus</i>)	Coyote (<i>Canis latrans</i>)
Eastern Chipmunk (<i>Tamias striatus</i>)	Striped Skunk (<i>Mephitis mephitis</i>)

Birds

Wild Turkey (<i>Meleagris gallopavo</i>)	Black-capped Chickadee (<i>Parus atricapillus</i>)
Wood Duck (<i>Aix sponsa</i>)	Pileated Woodpecker (<i>Dryocopus pileatus</i>)
Mallard (<i>Anas platyrhynchos</i>)	Dark-eyed Junco (<i>Junco hyemalis</i>)
Redtail Hawk (<i>Buteo jamaicensis</i>)	Common Crow (<i>Corvus brachyrhynchos</i>)
Red-eyed Vireo (<i>Vireo olivaceus</i>)	Green-backed Heron (<i>Butorides striatus</i>)
Blue Jay (<i>Cyanocitta cristata</i>)	American Robin (<i>Turdus migratorius</i>)
Gray Catbird (<i>Dumetella carolinensis</i>)	American Goldfinch (<i>Carduelis tristis</i>)

Reptiles/Amphibians

Green Frog (<i>Rana clamitans melanota</i>)	American Toad (<i>Bufo americanus</i>)
Red-spotted Newt (<i>Notophthalmus viridescens</i>)	Dusky Salamander (<i>Desmognathus fuscus</i>)

FIELD WORKSHEET #4 RECOMMENDATIONS

The following recommendations for Lot #11 of the Erie County Forestry Management Plan are based upon field data collected by Earth Spirit Educational Services, Inc. in the areas of Forest Ecology, Wildlife Biology and general Ecology.

Field Number 1

Description - This field represents a mature, mixed Hardwood Forest that includes and borders upon an extensive Marsh/Wet Meadow Community.

Recommendations - This field may be managed for selective hardwoods though it is recommended that the more mature Sugar Maples and Eastern Hemlock (D.B.H. greater than 24 inches) remain unmanaged for both ecological and educational purposes. It is also recommended that if management is prescribed for this field, a significant buffer should be established along both wetland and stream environments.

Field Numbers 2, 3 and 5

Description - These fields represent mature Conifer Plantations in the mid - late stages of hardwood succession with some mature Secondary Hardwoods such as Black Cherry (*Prunus serotina*) and Red Maple (*Acer rubrum*) in the canopy.

Recommendations - These fields of mature Red Pine are currently experiencing significant hardwood intrusions, slow growth and general decline and as a result, these plantations should be actively managed. Selected hardwoods, especially Black Cherry, may also receive a selective thinning as long as ample “seed trees” remain in order to promote hardwood regeneration.

Field Number 4

Description - This field represents a significant Wetland Community characterized by both open water and dense shrub thickets.

Recommendations - This field should remain without treatment in order to enhance ecological diversity and wildlife habitat while also providing excellent opportunities for environmental education.

Lot 11

Soils, Waterways and Topography

Soils

The upland portions of Lot 11 are primarily the well drained Chenango Gravelly Silt Loam (CkB and CkC), with 3-15% slopes. These soils are potentially highly erodible, and highly erodible on steeper slopes. The downslope soils are predominately the well drained highly erodible Valois Gravelly Silt Loam (VaC), with 8-15% slopes, moderate to rapid permeability. The wetland acreage is comprised of the somewhat poorly drained, potentially highly erodible Volusia Silt Loam (VoB), with 3-8% slopes and moderate permeability, the poorly drained, hydric Halsey Silt Loam (Ha), with moderate to moderately slow permeability, and the very poorly drained, hydric Palms Muck (Pa), with moderately rapid permeability in the organic layer, and moderate permeability in the underlying loamy material.

Waterways and Topography

The landscape on Lot 11 is generally flat to rolling and contains several acres of New York State wetlands and several small streams draining into the Cazenovia Creek upper watershed (Class C(T) streams) on the western portion of the lot, and the Buffalo Creek watershed (Class A) to the east. Fish habitat in Cazenovia Creek is stressed by sediment, oxygen demand, pathogens and hydromodification, from streambank erosion, road bank erosion, urban runoff, construction and on-site waste treatment. The primary concern is sediment from unstable soils in the upper watershed. Fish habitat in the Buffalo Creek watershed is impaired by thermal changes, pesticides, chlorine, nutrients, sediment, water level and pathogens, from agriculture, construction, urban runoff, on-site waste treatment, streambank erosion and road bank erosion. Warm water temperatures are the primary concern as a result of deforestation and removal of streambank vegetation. Forest management activities should be confined to dry seasons and after soil freeze to minimize soil disturbance, and stream cover should be maintained to protect trout habitat.

Lot 11

Forest Stewardship Recommendations

Stand A (Field 1)

HIGH PRIORITY

This is an uneven-aged stand of northern hardwoods containing predominantly sugar maple, beech, black cherry and hemlock with lower quantities of red maple, yellow birch and basswood. The stand density is moderately high with 80-130 sq ft/ac basal area. Maximum diameters are large sawtimber, 25-30"+; black cherry is especially high quality. Understory is composed of widely scattered sugar maple, beech and hemlock saplings, with a rich diversity of wildflowers, but few tree seedlings. There is no indication of a previous timber harvest in this stand, for at least several decades. A light, selection harvest could be done in this stand, across many diameters, reducing the basal area by no more than 1/3. Some of the trees of low to moderate longevity, such as cherry will start to decline in the next few decades and could be salvaged with such a harvest. The largest hemlock, beech and sugar maple may already be too far degraded for quality timber and should be retained for regeneration, wildlife and recreational purposes. Insist upon no-cut buffers about 100-150' wide along property boundaries, road frontage and around significant wetlands. Cutting should also not interfere with small wetlands or vernal pools. The terrain is rough and bumpy, but the upland soils have good internal drainage and there are no long slopes for erosion problems. The uplands have high site index for most trees with well-drained, acid, gravelly loam soils. Property boundaries need to be verified and painted; old fence wire and posts cannot always be trusted. Recheck in 15 years.

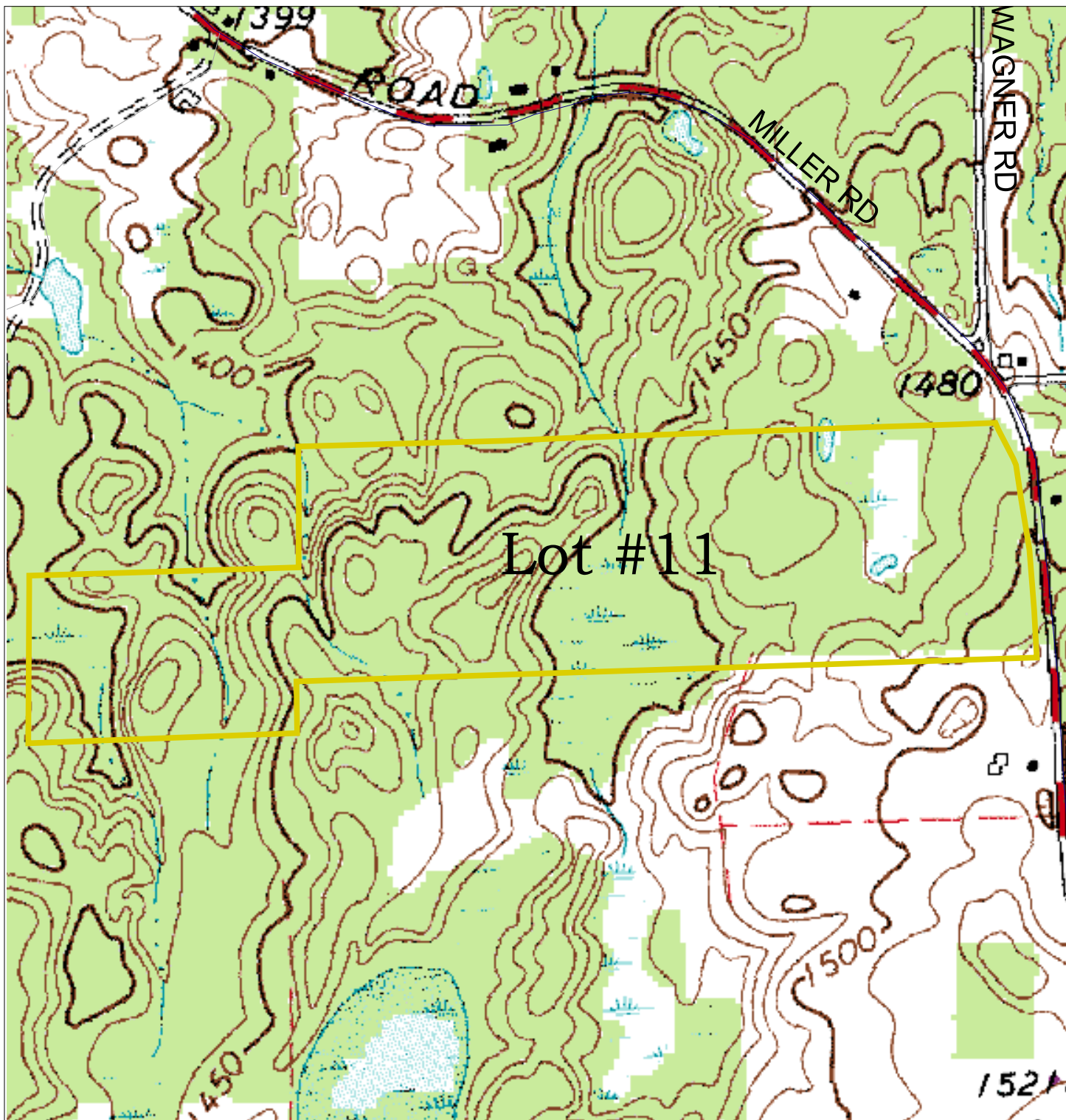
Stand B (Fields 2, 3, 5)

HIGH PRIORITY

These are areas of mature conifer plantations including red pine and Scots pine with widely scattered small to medium sawtimber size hardwoods of black cherry and red maple. The pine understory has scattered saplings of black cherry, red maple and white ash, but few seedlings. Some areas have evidence of stumps from thinning, but core samples did not show significant growth response. Stand density is high with diameters averaging 10-13" in the red pine and smaller in the Scots pine. Site index for hardwoods is also high on the gravelly loam soils. The mature pines should be scheduled for patch harvesting to complete the transition to native hardwoods. The scattered sawlog hardwoods of cherry and maple should be left for seed trees (5-10/ac), which then could be salvaged about 3-5 years after the conifers are cut. Recheck 3 years after conifer harvest.

Stand C (Field 4)

This is a wetland of scattered large shrubs, saplings and small pockets of open water, surrounded by short, steep sided wooded slopes and what appears to be a dike to the north. This appears on 1938 photos as a shrubby area with a large group of trees to the north totally surrounded by fields. This area has value as wildlife habitat and for outdoor education. Since the area has already been artificially diked, there may exist opportunities to adjust the water level to achieve various objectives.

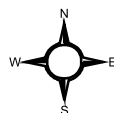


Erie County Forest Management Plan

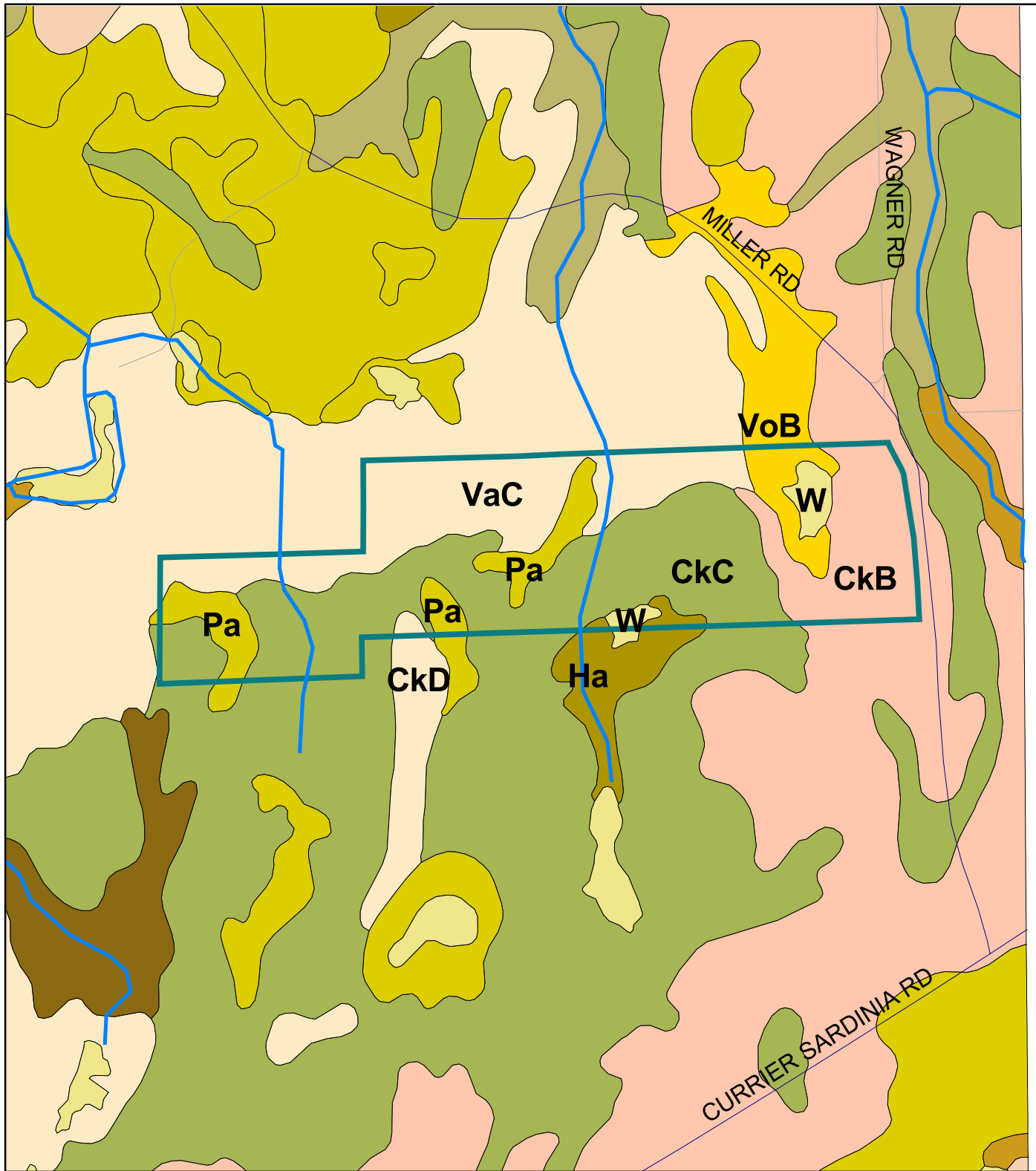
USGS TOPOGRAPHIC QUADRANGLE



Map Prepared By:
Erie County Soil and Water
Conservation District



600 0 600 Feet

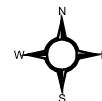


Erie County Forest Management Plan

LOT #11 - SOIL TYPES



Map Prepared By:
Erie County Soil and Water
Conservation District



300 0 300 600 900 Feet

A horizontal scale bar with markings at 300, 0, 300, 600, and 900 feet, used to measure distances on the map.

Brief Soil Descriptions – Lot 11

For further information refer to the *Soil Survey of Erie County, New York*.

Symbol

Name / Description

CkB *Chenango Gravelly Loam, 3 to 8 Percent Slopes*

Deep, gently sloping, well drained, low lime, gravelly loam soil formed mainly in gravel and sand. The available water capacity is low. Permeability is moderate to rapid in the surface soil and subsoil and generally rapid or very rapid in the substratum. PRIME FARMLAND, POTENTIALLY HIGHLY ERODIBLE LAND, CAPABILITY CLASS-IIs, NYS SOIL GROUP-2B, K=.24, T=3

CkC *Chenango Gravelly Loam, 8 to 15 Percent Slopes*

Deep, sloping, well drained, low lime, gravelly loam soil formed mainly in gravel and sand. The available water capacity is low. Permeability is moderate to rapid in the surface soil and subsoil and generally rapid or very rapid in the substratum. HIGHLY ERODIBLE LAND, CAPABILITY CLASS-IIIE, NYS SOIL GROUP-5b, K=.24, T=3

CkD *Chenango Gravelly Loam, 15 to 25 Percent Slopes*

Deep, moderately steep, well-drained, low lime, gravelly loam soil formed mainly in gravel and sand. The available water capacity is low. Permeability is moderate to rapid in the surface soil and subsoil and generally rapid or very rapid in the substratum. HIGHLY ERODIBLE LAND, CAPABILITY CLASS-IVe, NYS SOIL GROUP-6b, K=.24, T=3

Ha *Halsey Silt Loam*

Deep, nearly level, poorly drained and very poorly drained, medium lime, silt loam soil formed mainly in gravel and sand deposits. The available water capacity is moderate. Permeability is moderate or moderately slow in the subsoil and generally rapid in underlying layers. HYDRIC SOIL, CAPABILITY CLASS-IVw, NYS SOIL GROUP-7b, K=.24, T=5

Pa *Palms Muck*

Deep, nearly level, very poorly drained, medium lime, muck soil formed in organic deposits and underlain by loamy mineral soil material at depths of 16 inches or more. The available water capacity is generally high. Permeability is moderately rapid in the organic layers and moderate in the loamy material. Subject to wind erosion and subsidence when drained. No K or T values are assigned. HYDRIC SOIL, CAPABILITY CLASS-Vw, NYS SOIL GROUP-10 (6b WHEN DRAINED)

VaC *Valois Gravelly Silt Loam, 8 to 15 Percent Slopes*

Deep, sloping, well drained, low lime, gravelly silt loam soil formed in coarse loamy glacial till. The available water capacity is low to moderate. Permeability is moderate to rapid. HIGHLY ERODIBLE LAND, CAPABILITY CLASS-IIIE, NYS SOIL GROUP-5b, K=.24, T=3

VoB *Volusia Silt Loam, 3 to 8 Percent Slopes*

Deep, gently sloping, somewhat poorly drained, low lime, silt loam soil formed in fine loamy glacial till. It has a very firm fragipan at a depth of 15 to 50 inches. The available water capacity is moderate. Permeability is generally moderate above the fragipan and slow to very slow in the fragipan. POTENTIALLY HIGHLY ERODIBLE LAND, CAPABILITY CLASS-IIIW, NYS SOIL GROUP-6b, K=.37, T=3



1965 CONSERVATION PLAN MAP

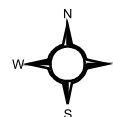
Erie County
Forest Management Plan

LOT # 1 1



Map Prepared By:
Erie County Soil and Water
Conservation District

* Basemap Source: 1995 Color IR Orthophotography



0 700 Feet



2003 STEWARDSHIP RECOMMENDATION MAP

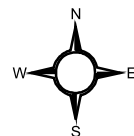
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* Basemap Source: 1995 Color IR Orthophotography



300 0 300 600 Feet



